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THE JOURNAL OF CELL BIOLOGY
VOL. 192, NO. 1, JANUARY 10, 2011

NEWS

In This Issue

2
- Syndecan-3 gets the message
- Cancer cells mothball mRNA after microtubule collapse
- Receptors flex to remove neurotransmitter brake

M. Leslie

In Focus

3
- Two microscopes are better than one

M. Leslie

People & Ideas

4
- Sean Munro: Revealing the Golgi's true identity

B. Short

REVIEWS

Reviews

7 Making heads or tails of phospholipids in mitochondria
Christof Osman, Dennis R. Voelker, and Thomas Langer

RESEARCH ARTICLES

Reports

17 p62 targeting to the autophagosome formation site requires self-oligomerization but not LC3 binding
Eisuke Itakura and Noboru Mizushima

Articles

29 Highly stable loading of Mcm proteins onto chromatin in living cells requires replication to unload
Marjorie A. Kuipers, Timothy J. Stasevich, Takayo Sasaki, Korey A. Wilson, Kristin L. Hazelwood, James G. McNally, Michael W. Davidson, and David M. Gilbert

43 SET8 is degraded via PCNA-coupled CRL4(CDT2) ubiquitylation in S phase and after UV irradiation
Stine Jørgensen, Morten Eskildsen, Kasper Fugger, Lisbeth Hansen, Marie Sofie Yoo Larsen, Arne Nedergaard Kousholt, Randi G. Syljuåsen, Morten Beck Trelle, Ole Nørregaard Jensen, Kristian Helin, and Claus Storgaard Sørensen

55 Homeostatic levels of SRC-2 and SRC-3 promote early human adipogenesis
Sean M. Hartig, Bin He, Weiwen Long, Benjamin M. Buehrer, and Michael A. Mancini

69 IGF-II is regulated by microRNA-125b in skeletal myogenesis
Yejing Ge, Yuting Sun, and Jie Chen

83 Microtubule disruption targets HIF-1α mRNA to cytoplasmic P-bodies for translational repression
Marisa Carbonaro, Aurora O'Brate, and Paraskevi Giannakakou

101 Dynamin2- and endothelial nitric oxide synthase–regulated invasion of bladder epithelial cells by uropathogenic *Escherichia coli*
Zhimin Wang, Ceba Humphrey, Nicole Frilot, Gaofeng Wang, Zhongzhen Nie, Nader H. Moniri, and Yehia Daaka

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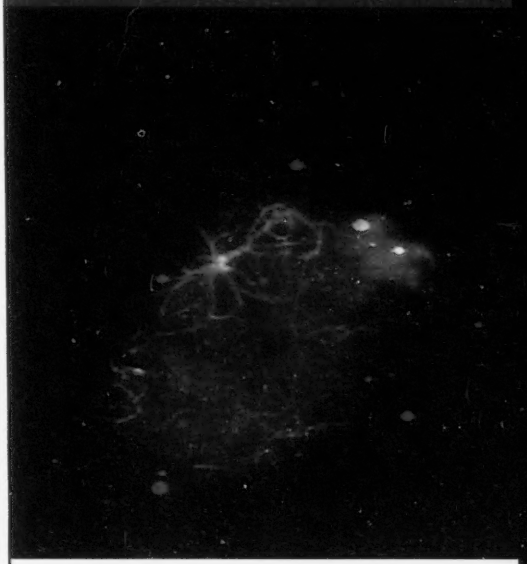


On the cover

Carbonaro et al. demonstrate that HIF-1α mRNA accumulates in P-bodies (green) when microtubules (magenta) are depolymerized, resulting in the transcription factor's translational repression. Image courtesy of Marisa Carbonaro.

See page 83.

111 Correlated fluorescence and 3D electron microscopy with high sensitivity and spatial precision
Wanda Kukulski, Martin Schorb, Sonja Welsch, Andrea Picco, Marko Kaksonen, and John A.G. Briggs

121 A role for oxysterol-binding protein–related protein 5 in endosomal cholesterol trafficking
Ximing Du, Jaspal Kumar, Charles Ferguson, Timothy A. Schulz, Yan Shan Ong, Wanjin Hong, William A. Prinz, Robert G. Parton, Andrew J. Brown, and Hongyuan Yang

137 A novel fast mechanism for GPCR-mediated signal transduction—control of neurotransmitter release
Yonatan M. Kupchik, Ofra Barchad-Avitzur, Jürgen Wess, Yair Ben-Chaim, Itzchak Parnas, and Hanna Parnas

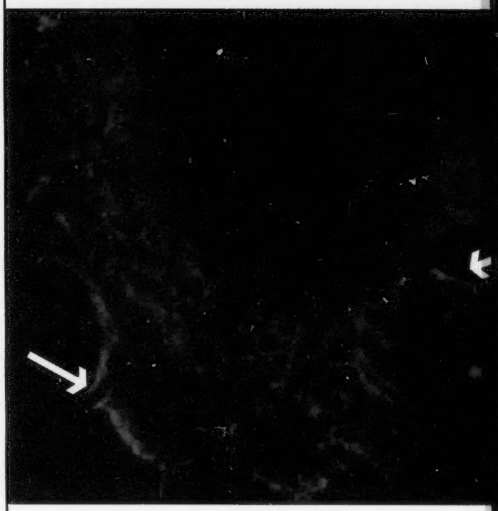
153 Heparan sulfate proteoglycan syndecan-3 is a novel receptor for GDNF, neurturin, and artemin
Maxim M. Bespalov, Yulia A. Sidorova, Sarka Tumova, Anni Ahonen-Bishopp, Ana Cathia Magalhães, Evgeny Kulesskiy, Mikhail Paveliev, Claudio Rivera, Heikki Rauvala, and Mart Saarma

171 BMP promotes motility and represses growth of smooth muscle cells by activation of tandem Wnt pathways
Vinicio A. de Jesus Perez, Ziad Ali, Tero-Pekka Alastalo, Fumiaki Ikeno, Hirofumi Sawada, Ying-Ju Lai, Thomas Kleisli, Edda Spiekerkoetter, Xiumei Qu, Laura H. Rubinos, Euan Ashley, Manuel Amieva, Shoukat Dedhar, and Marlene Rabinovitch

189 Su(dx) E3 ubiquitin ligase–dependent and –independent functions of Polychaetoid, the *Drosophila* ZO-1 homologue
Alexandre Djiane, Hideyuki Shimizu, Marian Wilkin, Sabine Mazleyrat, Martin D. Jennings, Johanna Avis, Sarah Bray, and Martin Baron

Corrections

201 ERK1/2 MAP kinases promote cell cycle entry by rapid, kinase-independent disruption of retinoblastoma–lamin A complexes
Javier Rodríguez, Fernando Calvo, José M. González, Berta Casar, Vicente Andrés, and Piero Crespo



The endocytic protein dynamin2 (green) is enriched at the sites where uropathogenic *E. coli* (red) attach and enter bladder epithelial cells. Wang et al. show that the bacteria promote their invasion into host cells by inducing dynamin2 S-nitrosylation.
Image © 2011 Wang et al.
See page 101.

JCB
THE JOURNAL OF CELL BIOLOGY
VOL. 192, NO. 2, JANUARY 24, 2011

NEWS

In This Issue

204 • ESCRT-III has an escort
• Stiff ECM puts the brakes on microtubule growth
• N-WASP allows axons to cover up
M. Leslie

In Focus

205 • Helping the embryo find closure
M. Leslie

People & Ideas

206 • Matthew Welch: The many branches of actin regulation
B. Short

REVIEWS

Reviews

209 p53 and its mutants in tumor cell migration and invasion
Patricia A. J. Muller, Karen H. Vousden, and Jim C. Norman

RESEARCH ARTICLES

Reports

219 ATR-mediated phosphorylation of DNA polymerase η is needed for efficient recovery from UV damage
Thomas Göhler, Simone Sabbioneda, Catherine M. Green, and Alan R. Lehmann

229 A single ubiquitin is sufficient for cargo protein entry into MVBs in the absence of ESCRT ubiquitination
Daniel K. Stringer and Robert C. Piper

243 N-WASP is required for membrane wrapping and myelination by Schwann cells
Nurit Novak, Vered Bar, Helena Sabanay, Shahar Frechter, Martine Jaegle, Scott B. Snapper, Dies Meijer, and Elior Peles

Articles

251 Replication protein A promotes 5′→3′ end processing during homology-dependent DNA double-strand break repair
Hong Yan, Thomas Toczylowski, Jill McCane, Chinyi Chen, and Shuren Liao

263 RAD21L, a novel cohesin subunit implicated in linking homologous chromosomes in mammalian meiosis
Jibak Lee and Tatsuya Hirano

277 RNA polymerase I–specific subunits promote polymerase clustering to enhance the rRNA gene transcription cycle
Benjamin Albert, Isabelle Léger-Silvestre, Christophe Normand, Martin K. Ostermaier, Jorge Pérez-Fernández, Kostya I. Panov, Joost C.B.M. Zomerdijk, Patrick Schultz, and Olivier Gadal

295 Bro1 binding to Snf7 regulates ESCRT-III membrane scission activity in yeast
Megan Wemmer, Ishara Azmi, Matthew West, Brian Davies, David Katzmann, and Greg Odorizzi

307 The *Drosophila* blood brain barrier is maintained by GPCR-dependent dynamic actin structures
Meital Hatan, Vera Shinder, David Israeli, Frank Schnorrer, and Talila Volk

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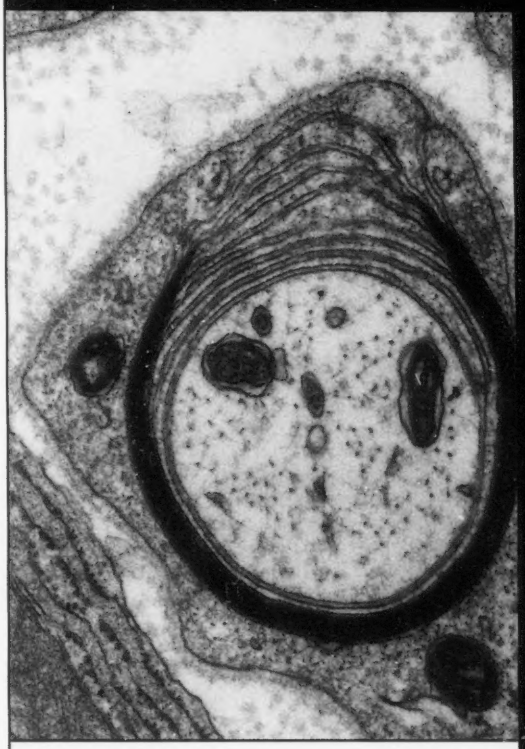


On the cover

A cross section of a mouse sciatic nerve shows a Schwann cell wrapping a neuronal axon in a myelin sheath. Novak et al. demonstrate that the actin regulator N-WASP is required for this process. Image courtesy of Nurit Novak.
See page 243.

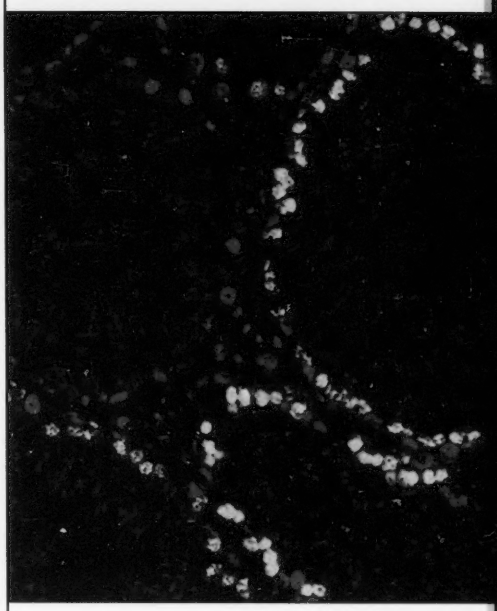
321 Distinct ECM mechanosensing pathways regulate microtubule dynamics to control endothelial cell branching morphogenesis
Kenneth A. Myers, Kathryn T. Applegate, Gaudenz Danuser, Robert S. Fischer, and Clare M. Waterman

335 Asymmetric distribution of Echinoid defines the epidermal leading edge during *Drosophila* dorsal closure
Caroline Laplante and Laura A. Nilson

349 Neural integrity is maintained by dystrophin in *C. elegans*
Shan Zhou and Lihsia Chen

Corrections

365 Heparanase deglycanation of syndecan-1 is required for binding of the epithelial-restricted prosecretory mitogen lacritin
Peisong Ma, Shannon L. Beck, Ronald W. Raab, Robert L. McKown, George L. Coffman, Atsushi Utani, William J. Chirico, Alan C. Rapraeger, and Gordon W. Laurie



Lee and Hirano identify a novel cohesin subunit called RAD21L (green), which acts in place of the canonical subunit RAD21 (red) to hold homologous chromosomes together during early meiosis. The two proteins show a mutually exclusive expression pattern in mouse testis.
Image © 2011 Lee and Hirano.
See page 263.

JCB
THE JOURNAL OF CELL BIOLOGY
VOL. 192, NO. 3, FEBRUARY 7, 2011

NEWS

In This Issue

368
- Mutant phagosomes bite off more than they can chew
- Sir3 helps telomeres stick together
- IRSp53 keeps ECM signaling up to Par

B. Short

In Focus

369
- BRCA1 on the move

B. Short

People & Ideas

370
- María Blasco: Keeping a cap on cancer and aging

C. Sedwick

REVIEWS

Reviews

373 Circulating tumor cells: approaches to isolation and characterization
Min Yu, Shannon Stott, Mehmet Toner, Shyamala Maheswaran, and Daniel A. Haber

RESEARCH ARTICLES

Reports

383 The *full-of-bacteria* gene is required for phagosome maturation during immune defense in *Drosophila*
Mohammed Ali Akbar, Charles Tracy, Walter H.A. Kahr, and Helmut Krämer

391 The death domain kinase RIP1 links the immunoregulatory CD40 receptor to apoptotic signaling in carcinomas
Pauline G. Knox, Clare C. Davies, Marina Ioannou, and Aristides G. Eliopoulos

Articles

401 Replication protein A safeguards genome integrity by controlling NER incision events
René M. Overmeer, Jill Moser, Marcel Volker, Hanneke Kool, Alan E. Tomkinson, Albert A. van Zeeland, Leon H.F. Mullenders, and Maria Fousteri

417 Clustering heterochromatin: Sir3 promotes telomere clustering independently of silencing in yeast
Myriam Ruault, Arnaud De Meyer, Isabelle Loïodice, and Angela Taddei

433 The N-terminal coiled-coil of Ndel1 is a regulated scaffold that recruits LIS1 to dynein
Eliza Żyłkiewicz, Monika Kijańska, Won-Chan Choi, Urszula Derewenda, Zygmunt S. Derewenda, and P. Todd Stukenberg

447 Barth syndrome mutations that cause tafazzin complex lability
Steven M. Claypool, Kevin Whited, Santi Srijumnong, Xianlin Han, and Carla M. Koehler

463 Full characterization of GPCR monomer–dimer dynamic equilibrium by single molecule imaging
Rinshi S. Kasai, Kenichi G. N. Suzuki, Eric R. Prossnitz, Ikuko Koyama-Honda, Chieko Nakada, Takahiro K. Fujiwara, and Akihiro Kusumi

481 Modeling spinal muscular atrophy in *Drosophila* links *Smn* to FGF signaling
Anindya Sen, Takakazu Yokokura, Mark W. Kankel, Douglas N. Dimlich, Jan Manent, Subhabrata Sanyal, and Spyros Artavanis-Tsakonas

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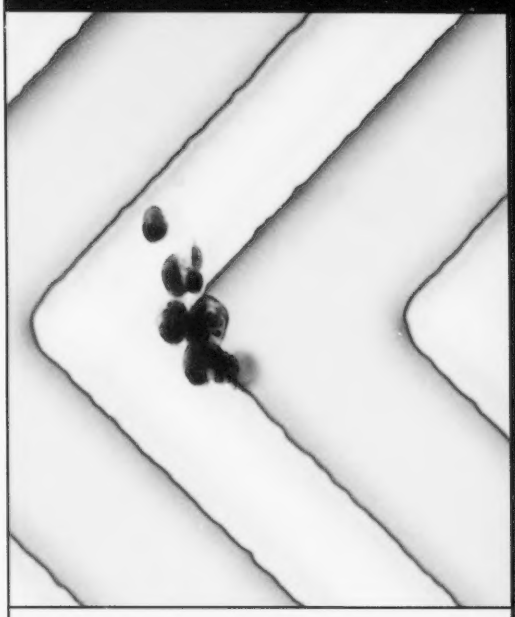


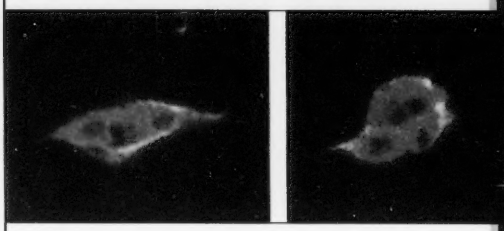
On the cover

Circulating tumor cells from the peripheral blood of a prostate cancer patient are captured on a Herringbone-Chip. Yu et al. review methods of isolating and characterizing these rare metastatic precursors.
Image courtesy of Shannon Stott.
See page 373.

497 A novel role for BRCA1 in regulating breast cancer cell spreading and motility
Elisabeth D. Coene, Catarina Gadelha, Nicholas White, Ashraf Malhas, Benjamin Thomas, Michael Shaw, and David J. Vaux

513 Cell behaviors regulated by guidance cues in collective migration of border cells
Minna Poukkula, Adam Cliffe, Rishita Changede, and Pernille Rørth

525 The serine/threonine kinase Par1b regulates epithelial lumen polarity via IRSp53-mediated cell–ECM signaling
David Cohen, Dawn Fernandez, Francisco Lázaro-Diéguez, and Anne Müsch



Poukkula et al. describe how guidance cues affect the behavior of border cells (green) at both early (left) and late (right) phases of their collective migration through *Drosophila* egg chambers. Image © 2011 Poukkula et al.
See page 513.

JCB
THE JOURNAL OF CELL BIOLOGY
VOL. 192, NO. 4, FEBRUARY 21, 2011

NEWS

In This Issue

542 • Sphingolipid imbalance can take out an eye
• Annexin keeps tau on a short leash
• Natural killer cells commute death sentence
M. Leslie

In Focus

543 • Hedgehog, meet Patched
M. Leslie

People & Ideas

544 • Harald Stenmark: Hands on FYVE-fingers
C. Sedwick

REVIEWS

Reviews

547 Four faces of cellular senescence
Francis Rodier and Judith Campisi

RESEARCH ARTICLES

Reports

557 Sphingosine kinases and their metabolites modulate endolysosomal trafficking in photoreceptors
Ikuko Yonamine, Takeshi Bamba, Niraj K. Nirala, Nahid Jesmin, Teresa Kosakowska-Cholody, Kunio Nagashima, Eiichiro Fukusaki, Jairaj K. Acharya, and Usha Acharya

Articles

569 *Xenopus* HJURP and condensin II are required for CENP-A assembly
Rafael Bernad, Patricia Sánchez, Teresa Rivera, Miriam Rodríguez-Corsino, Ekaterina Boyarchuk, Isabelle Vassias, Dominique Ray-Gallet, Alexei Arnaoutov, Mary Dasso, Geneviève Almouzni, and Ana Losada

583 The yeast Cbk1 kinase regulates mRNA localization via the mRNA-binding protein Ssd1
Cornelia Kurischko, Hong Kyung Kim, Venkata K. Kuravi, Juliane Pratzka, and Francis C. Luca

599 Tem1 localization to the spindle pole bodies is essential for mitotic exit and impairs spindle checkpoint function
Mauricio Valerio-Santiago and Fernando Monje-Casas

615 Spermidine and resveratrol induce autophagy by distinct pathways converging on the acetylproteome
Eugenia Morselli, Guillermo Mariño, Martin V. Bennetzen, Tobias Eisenberg, Evgenia Megalou, Sabrina Schroeder, Sandra Cabrera, Paule Bénit, Pierre Rustin, Alfredo Criollo, Oliver Kepp, Lorenzo Galluzzi, Shensi Shen, Shoaib Ahmad Malik, Maria Chiara Maiuri, Yoshiyuki Horio, Carlos López-Otín, Jens S. Andersen, Nektarios Tavernarakis, Frank Madeo, and Guido Kroemer

631 Polycystin-2 takes different routes to the somatic and ciliary plasma membrane
Helen Hoffmeister, Karin Babinger, Sonja Gürster, Anna Cedzich, Christine Meese, Karin Schadendorf, Larissa Osten, Uwe de Vries, Anne Rascle, and Ralph Witzgall

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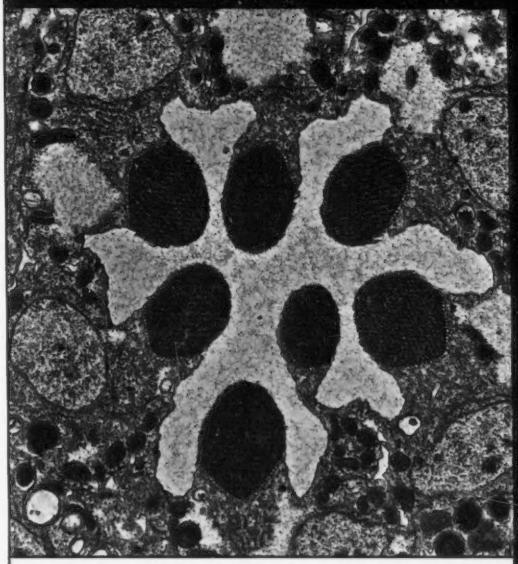


On the cover

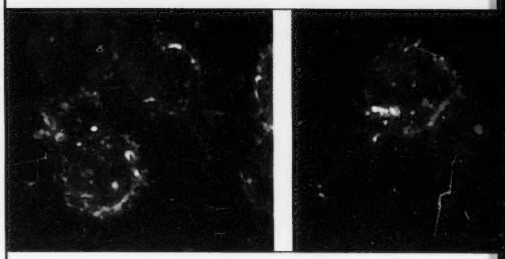
Electron micrograph of wild-type *Drosophila* photoreceptors. Yonamine et al. demonstrate that overexpressing sphingosine kinase 2 causes photoreceptor degeneration and boosts the lysosomal degradation of light-sensing proteins such as Rhodopsin by increasing the levels of dihydrosphingosine 1 phosphate compared to sphingosine 1 phosphate. Image courtesy of Kunio Nagashima, Jairaj Acharya, and Usha Acharya.
See page 557.

647 The frontotemporal dementia mutation R406W blocks tau's interaction with the membrane in an annexin A2–dependent manner
Anne Gauthier-Kemper, Carina Weissmann, Nataliya Golovyashkina, Zsofia Sebö-Lemke, Gerard Drewes, Volker Gerke, Jürgen J. Heinisch, and Roland Brandt

663 Centrosome docking at the immunological synapse is controlled by Lck signaling
Andy Tsun, Ihjaaz Qureshi, Jane C. Stinchcombe, Misty R. Jenkins, Maike de la Roche, Joanna Kleczkowska, Rose Zamoyska, and Gillian M. Griffiths

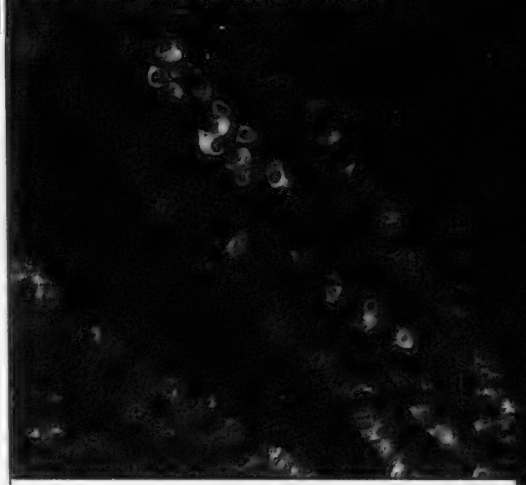
675 Inhibitory signaling blocks activating receptor clustering and induces cytoskeletal retraction in natural killer cells
Thushara P. Abeyweera, Ernesto Merino, and Morgan Huse

691 Glypican-5 stimulates rhabdomyosarcoma cell proliferation by activating Hedgehog signaling
Fuchuan Li, Wen Shi, Mariana Capurro, and Jorge Filmus



Tsun et al. show that, unlike wild-type cells (left), cytotoxic T lymphocytes lacking the tyrosine kinase Lck (right) are unable to dock their centrosomes (red) at the immunological synapse (bright green) formed where the lymphocyte (white) contacts its target cell.
Image © 2011 Tsun et al.
See page 663.

JCB
THE JOURNAL OF CELL BIOLOGY
VOL. 192, NO. 5, MARCH 7, 2011



On the cover

Gerbe et al. define tuft cells as a new secretory lineage in the intestine. These rare cells can be distinguished from the four other main cell types of the intestinal epithelium by their co-expression of SOX9 (red) and COX1 (green). Microtubules are shown in white. Image courtesy of François Gerbe.
See page 767.

NEWS

In This Issue

706 • Rad54 mutant stays rooted to the spot
• A fifth amendment to the intestine's constitution
• The Tudor family produces heirs
B. Short

In Focus

707 • The wrong suspect?
B. Short

People & Ideas

708 • Joan Steitz: RNA is a many-splendored thing
C. Sedwick

REVIEWS

Reviews

711 On emerging nuclear order
Indika Rajapakse and Mark Groudine

723 Principles of chromosomal organization: lessons from yeast
Christophe Zimmer and Emmanuelle Fabre

RESEARCH ARTICLES

Articles

735 ATP-dependent and independent functions of Rad54 in genome maintenance
Sneha Agarwal, Nigget A. van Cappellen, Anne Guénolé, Berina Eppink, Sam E.W. Linser, Eric Mellenbergh, Adriaan Houtsmuller, Paula Kanaar, and Jeroen Essers

751 Defining the earliest step of cardiovascular progenitor specification during embryonic stem cell differentiation
Antoine Bondue, Simon Tännler, Giuseppe Chiaseone, Samira Grabnar, Mirana Ramialison, Catherine Paulissen, Benjamin Beck, Richard Harvey, and Cédric Blanpain

767 Distinct ATOH1 and Neurog3 requirements define tuft cells as a new secretory cell type in the intestinal epithelium
François Gerbe, Johan H. van Es, Leila Makrini, Bénédicte Brulin, Georg Mellitzer, Sylvie Robine, Béatrice Romagnolo, Noam F. Shroyer, Jean-François Bourgaux, Christine Pignodel, Hans Clevers, and Philippe Jay

781 TDRD5 is required for retrotransposon silencing, chromatoid body assembly, and spermiogenesis in mice
Yukihiro Yabuta, Hiroshi Ohta, Takaya Abe, Kazuki Kurimoto, Shinichiro Chuma, and Mitinori Saitou

797 Translation of myelin basic protein mRNA in oligodendrocytes is regulated by integrin activation and hnRNP-K
Lisbeth S. Laursen, Colin W. Chan, and Charles ffrench-Constant

813 Cdk-mediated phosphorylation of the Kvβ2 auxiliary subunit regulates Kv1 channel axonal targeting
Hélène Vacher, Jae-Won Yang, Oscar Cerda, Amanda Auld-Tsou, Bénédicte Dargent, and James S. Trimmer

825 Processing and turnover of the Hedgehog protein in the endoplasmic reticulum
Xin Chen, Hanna Tukachinsky, Chih-Hsiang Huang, Cindy Jao, Yue-Ru Chu, Hsiang-Yun Tang, Britta Mueller, Sol Schulman, Tom A. Rapoport, and Adrian Salic

Articles with related stories in the IN THIS ISSUE section have page numbers in RED; articles related to the IN FOCUS feature have page numbers in BLUE.

839 OATL1, a novel autophagosome-resident Rab33B-GAP, regulates autophagosomal maturation
Takashi Itoh, Eiko Kanno, Takefumi Uemura, Satoshi Waguri, and Mitsunori Fukuda

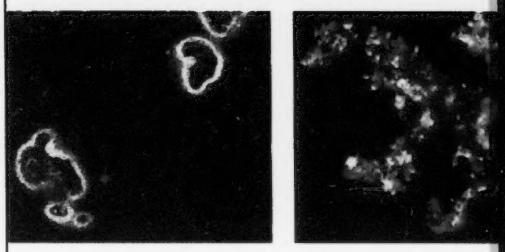
855 A Nup133-dependent NPC-anchored network tethers centrosomes to the nuclear envelope in prophase
Stéphanie Bolhy, Imène Bouhlel, Elisa Dultz, Tania Nayak, Michela Zuccolo, Xavier Gatti, Richard Vallee, Jan Ellenberg, and Valérie Doye

873 Loss of mitochondrial complex I activity potentiates dopamine neuron death induced by microtubule dysfunction in a Parkinson's disease model
Won-Seok Choi, Richard D. Palmiter, and Zhengui Xia

883 Kindlin-3–mediated signaling from multiple integrin classes is required for osteoclast-mediated bone resorption
Sarah Schmidt, Inaam Nakchbandi, Raphael Ruppert, Nina Kawelke, Michael W. Hess, Kristian Pfaller, Pierre Jurdic, Reinhard Fässler, and Markus Moser

Corrections

899 *Xenopus* HJURP and condensin II are required for CENP-A assembly
Rafael Bernad, Patricia Sánchez, Teresa Rivera, Miriam Rodríguez-Corsino, Ekaterina Boyarchuk, Isabelle Vassias, Dominique Ray-Gallet, Alexei Arnaoutov, Mary Dasso, Geneviève Almouzni, and Ana Losada



Unlike wild-type cells (left), osteoclasts lacking the integrin-activating protein kindlin-3 (right) fail to form "sealing zones," structures bound by a ring of actin (green) and vinculin (red), which the cells use to attach to and resorb bone. Image © 2011 Schmidt et al.
See page 883.

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NEWS

In This Issue

902 • Location is everything
• Connecting the cytokinesis dots
• Osteoblasts are bone idle without Frizzled-9
B. Short

In Focus

903 • Cadherins trade bonds
B. Short

People & Ideas

904 • Pascale Cossart: The ins and outs of *Listeria*
C. Sedwick

REVIEWS

Reviews

907 Dynamics of adherens junctions in epithelial establishment, maintenance, and remodeling
Buzz Baum and Marios Georgiou

RESEARCH ARTICLES

Reports

919 A CHOP-regulated microRNA controls rhodopsin expression
Shannon Behrman, Diego Acosta-Alvear, and Peter Walter

929 PGL proteins self associate and bind RNPs to mediate germ granule assembly in *C. elegans*
Momoyo Hanazawa, Masafumi Yonetani, and Asako Sugimoto

939 P granules extend the nuclear pore complex environment in the *C. elegans* germ line
Dustin L. Updike, Stephanie J. Hachey, Jeremy Kreher, and Susan Strome

949 Metabolic status rather than cell cycle signals control quiescence entry and exit
Damien Laporte, Anne Lebaudy, Annelise Sahin, Benoît Pinson, Johanna Ceschin, Bertrand Daignan-Fornier, and Isabelle Sagot

959 The astrin–kinastrin/SKAP complex localizes to microtubule plus ends and facilitates chromosome alignment
Anja K. Dunsch, Emily Linnane, Francis A. Barr, and Ulrike Gruneberg

969 A vertebrate N-end rule degron reveals that Orc6 is required in mitosis for daughter cell abscission
Juan A. Bernal and Ashok R. Venkitaraman

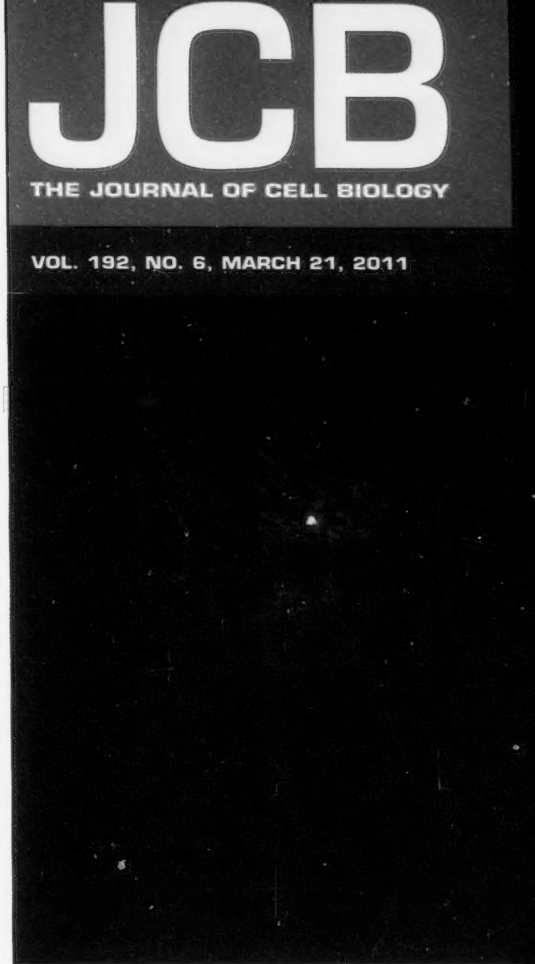
Articles

979 Phosphatidylserine is a critical modulator for Akt activation
Bill X. Huang, Mohammed Akbar, Karl Kevala, and Hee-Yong Kim

993 Casein kinase 1 delta functions at the centrosome to mediate Wnt-3a–dependent neurite outgrowth
Yoshimi Endo Greer and Jeffrey S. Rubin

1005 Assembly and architecture of precursor nodes during fission yeast cytokinesis
Damien Laporte, Valerie C. Coffman, I-Ju Lee, and Jian-Qiu Wu

Articles with related stories in the IN THIS ISSUE section have page numbers in RED; articles related to the IN FOCUS feature have page numbers in BLUE.



On the cover

Casein kinase 1δ (green) localizes to the centrosome (red), where it promotes neurite extension in response to Wnt-3a. Image courtesy of Yoshimi Endo Greer.

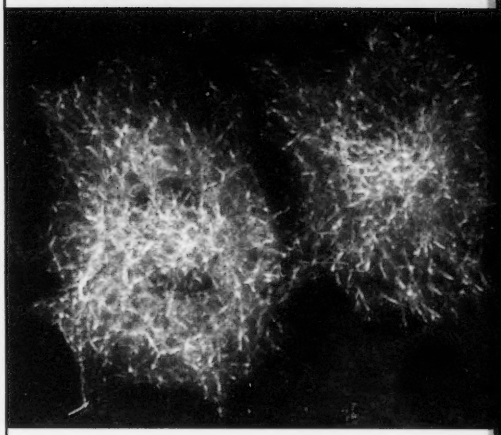
See page 993.

1023 MKS and NPHP modules cooperate to establish basal body/transition zone membrane associations and ciliary gate function during ciliogenesis
Corey L. Williams, Chunmei Li, Katarzyna Kida, Peter N. Inglis, Swetha Mohan, Lucie Semenec, Nathan J. Bialas, Rachel M. Stupay, Nansheng Chen, Oliver E. Blacque, Bradley K. Yoder, and Michel R. Leroux

1043 The yeast lipin orthologue Pah1p is important for biogenesis of lipid droplets
Oludotun Adeyo, Patrick J. Horn, SungKyung Lee, Derk D. Binns, Anita Chandrahas, Kent D. Chapman, and Joel M. Goodman

1057 Control of bone formation by the serpentine receptor Frizzled-9
Joachim Albers, Jochen Schulze, F. Timo Beil, Matthias Gebauer, Anke Baranowsky, Johannes Keller, Robert P. Marshall, Kristofer Wintges, Felix W. Friedrich, Matthias Priemel, Arndt F. Schilling, Johannes M. Rueger, Kerstin Cornils, Boris Fehse, Thomas Streichert, Guido Sauter, Franz Jakob, Karl L. Insogna, Barbara Pober, Klaus-Peter Knobeloch, Uta Francke, Michael Amling, and Thorsten Schinke

1073 Cadherin exits the junction by switching its adhesive bond
Soonjin Hong, Regina B. Troyanovsky, and Sergey M. Troyanovsky



The mitotic spindle-associated protein astrin is required for chromosome alignment at the metaphase plate. Dunsch et al. reveal that, together with its binding partner kinastrin, astrin tracks microtubule plus ends, as seen in these overlaid time-lapse images. (Different colors indicate astrin's localization at sequential time points.)
Image © 2011 Dunsch et al.
See page 959.